



09/483 969

Cofc

Doc Code: VNUS-53427

PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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TRANSMITTAL FORM OIPE IAP-05 APR 18 2006 PATENT & TRADEMARK OFFICE (To be used for correspondence after initial filing)	Application Number	Pat. No. 6,981,972
	Filing Date	Issued January 3, 2006
	First Named Inventor	Farley, et al.
	Art Unit	3763
	Examiner Name	Rodriguez, C
Total Number of Pages in This Submission		Attorney Docket Number VNUS-53427

ENCLOSURES (Check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC
<input checked="" type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment / Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
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<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> Landscape Table on CD	
<input type="checkbox"/> Response to Missing Parts/ Incomplete Application	Remarks	
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53		

Certificate
APR 20 2006
of Correction

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT		
Firm Name	FULWIDER PATTON LLP	
Signature		
Printed name	James Juo	
Date	4/12/06	Reg. No. 36,177

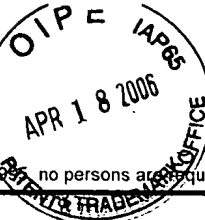
CERTIFICATE OF TRANSMISSION/MAILING			
I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:			
Signature			
Typed or printed name	James Juo	Date	April 12, 2006

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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APR 21 2006

Dpc Code: VNUS-53427


 PTO/SB/17 (01-06)
 Approved for use through 07/31/2006. OMB 0651-0032
 Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL for FY 2006

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) \$100.00

Complete if Known

Application Number	09/483,969
Filing Date	January 18, 2000
First Named Inventor	Farley
Examiner Name	C. Rodriguez
Art Unit	3763
Attorney Docket No.	VNUS-53427

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 06-2425 Deposit Account Name: FULWIDER PATTON

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee

☒ Charge any additional fee(s) or any underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☒ Credit any overpayments

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FEE CALCULATION (All the fees below are due upon filing or may be subject to a surcharge.)

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid(\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
- 20 or HP =	x	\$25.00	= \$0.00

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims	Extra Claims	Fee (\$)	Fee Paid (\$)
- 3 or HP =	x	\$100.00	= \$0.00

HP = highest number of independent claims paid for, if greater than 3.

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listing under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
- 100 =	0	/ 50 0 (round up to a whole number) x	\$125.00	= \$0.00

4. OTHER FEE(S)

Non-English specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Request for Certificate of Correction

\$100.00

SUBMITTED BY

Signature		Registration No. (Attorney/Agent)	36,177	Telephone	(310) 824-5555
Name (Print/Type)	James Juo	Date	4/12/06		

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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APR 21 2006



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of

BRIAN E. FARLEY ET AL.

Patent No.: 6,981,972 B1

Issued: January 3, 2006

Serial No: 09/483,969

Filed: January 18, 2000

For: APPARATUS FOR TREATING
VENOUS INSUFFICIENCY USING
DIRECTIONALLY APPLIED
ENERGY

Examiner: Cris L. Rodriguez

Group Art Unit: 3763

Client ID/Matter No: VNUS 53427

April 6, 2006
Los Angeles, California

REQUEST FOR CERTIFICATE OF CORRECTION

Certificate of Correction Department
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The above-identified patent has been found to have the errors set forth in the enclosed Certificate of Correction. It is requested that this Certificate of Correction be issued and returned to us. Since these errors occurred in the final printing phase of the patent and in the final application, a check in the amount of \$100.00 is enclosed to cover the necessary fees. Should the Office determine that additional fees are needed, please charge Deposit Account No. 06-2425.

The errors are verifiable in the patent application file as follows:

04/19/2006 MBERHE 00000030 6981972

01 FC:1811

100.00 0P

APR 21 2006

ERROR

Column 2, line 57, delete "dose" and insert --close--.

Column 18, line 33, delete "minimized" and insert --minimize--.

Column 22, line 30, delete "31" and insert -32--.

APPLICATION FILE

Application filed on January 18, 2000.
See Attachment, page 3, line 16.

Applicant error.

Amendment dated April 14, 2005.
See Attachment, page 9.

These errors occurred in good faith and correction thereof does not involve such changes in the patent as would constitute new matter or would require re-examination. It is requested that a Certificate of Correction be issued and returned to us.

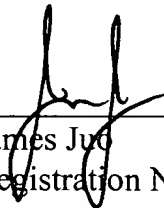
Attached hereto, in duplicate, is Form PTO-1050, with at least one copy being suitable for printing.

A duplicate of this document is attached.

Respectfully submitted,

FULWIDER PATTON LLP

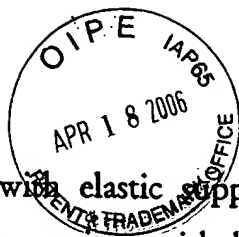
By: _____


James Judd
Registration No. 36,177

JJ:ck
Enclosures

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Customer No. 24201

APR 21 2006



externally with elastic support hose, perforator ligation, surgical valve repair, and grafting vein sections with healthy valves from the arm into the leg. These methods have variable effectiveness. Moreover, invasive surgery has its associated complications with risk to life and expense. Similarly, the palliative therapies require major lifestyle changes for the patient. For example, the ulcers may recur unless the patient continues to elevate the legs and use pressure gradient stockings for long continuous periods of time.

Due to the time-consuming and invasive nature of the current surgical treatments, such as valvuloplasty or vein segment grafting, typically only one valve is treated during any single procedure. This greatly limits the ability of the physician to fully treat patients suffering from chronic venous insufficiency. Every instance of invasive surgery, however, has its associated complications with morbidity and expense.

Another type of treatment, the ligation of vascular lumina by cauterization or coagulation using electrical energy from an electrode, has been employed as an alternative to the surgical removal of superficial and perforator veins. However, such ligation procedures also close off the lumen, essentially destroying its functional capability. For example, it is known to introduce an electrode into the leg of a patient, and position the electrode adjacent the exterior of the varicose veins to be treated. Through a small stab incision, a probe is forced through the subcutaneous layer between the fascia and the skin, and then to the various veins to be destroyed. A monopolar electrode at the outer end of the probe is placed adjacent the varicose vein and the return electrode is placed on the skin. Once properly positioned, an alternating current of 500 kiloHertz is applied to destroy the adjacent varicose veins by electrocoagulation. The coagulated veins lose the function of allowing blood to flow through, and are no longer of use. For example, occluding or ligating the saphenous vein would render that vein unavailable for harvesting in other surgical procedures such as coronary by-pass operations.

An approach used to shrink a dilated vein involves the insertion of a catheter that provides RF or other energy to the vein tissue. The amount of energy imparted is controlled so that shrinkage occurs as desired. However, one such device is substantially omni-directional in nature and does not permit the application of energy to only a selected portion of the vein. The directional application of energy from such a catheter to affect only a selected portion of the tissue would be particularly useful in the case



86. (NEW) The apparatus of claim 85 further comprising a piezoelectric element located adjacent the electrodes, the piezoelectric element producing pulse-echo soundings of the vein to determine the vein diameter and the extent of vein shrinkage.
87. (NEW) The apparatus of claim 85 further comprising a temperature sensor located on one of the at least two electrodes.
88. (NEW) The apparatus of claim 85 further comprising a temperature sensor located between the two electrodes.
89. (NEW) The apparatus of claim 85 wherein the catheter includes a plurality of extendable members having a plurality of bowable sections, each bowable section including one of the at least two electrodes.
90. (NEW) The apparatus of claim 85 wherein the working end of the catheter has a diameter larger than the diameter of the remainder of the catheter.
91. (NEW) The apparatus of claim 85 wherein the working end of the catheter further includes ports for providing a fluid to the vein during treatment.
92. (NEW) The apparatus of claim 85 wherein the electrodes are formed from non-insulated portion of a metallic plate disposed in the working end of the catheter.
93. (NEW) The apparatus of claim 92 wherein the electrodes are formed into pairs, wherein each pair of electrodes comprises a discrete pair of opposite polarity electrodes and the electrodes within each discrete pair are arranged such that an electrode in one discrete pair is adjacent a like polarity electrode of an adjacent pair.
94. (NEW) The apparatus of claim 93 comprising an even number of electrodes, wherein said even number comprises at least four, and wherein said even

**UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION**

Page 1 of 1

PATENT NO. : 6,981,972 B1

APPLICATION NO.: 09/483,969

ISSUE DATE : January 3, 2006

INVENTOR(S) : Brian E. Farley et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 2,

Line 57, delete "dose" and insert --close--.

Column 18,

Line 33, delete "minimized" and insert --minimize--.

Column 22,

Line 30, delete "31" and insert --32--.

MAILING ADDRESS OF SENDER:

**James Juo
Fulwider Patton Lee & Utecht LLP
6060 Center Drive, 10th Floor
Los Angeles, CA 90045**

This collection of information is required by 37 CFR 1.322 and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief of Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450 Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORM TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner of Patents P.O. Box 1450 Alexandria, VA 22313-1450

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